PENILE PARAFFINOMA: SURGICAL MANAGEMENT IS STILL THE BEST OPTION

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ABSTRACT

Background: Penile paraffinoma is a rare cause of penile swelling that occurs as a consequence of penile augmentation procedures which are performed by non-medical personnel without proper medical consultations. It is a serious condition that causes a negative impact on patients inflicted with it and it must be properly addressed.

This is a case report on a 32-year-old gentleman who presented with penile swelling and subsequently diagnosed with penile paraffinoma. This article describes the patient’s presentation and the surgical management which is the best treatment option available.

Keywords: penile, enlargement, augmentation, surgical, urology

1.0 Introduction

Penile paraffinoma (also known as sclerosing lipogranuloma) is a peculiar differential diagnosis for a patient who presents with penile swelling. It is a rare condition but a known complication of illicit injection of liquid paraffin by non-medical personnel that is meant for penile enlargement [1][2].

Epidemiologically, according to a systematic search of PubMed and Scopus performed by AP Downey et al in 2018, a total of 124 penile paraffinoma cases were found and they dated between the year 1956 and 2017 whereby most of the cases were reported in Korea (31.7%) and the most commonly used substance for injection is liquid paraffin (80.2%) [3]. According to the same systematic search, this condition manifests late following the time of injection with a median interval of 2 years. Patients with penile paraffinoma presented with penile swelling being the most common presenting symptom (30.2%) followed by skin ulcerations (15.4%), penile deformity (11.4%) and painful erections (8%) to name a few.
The treatment options for this condition includes conservative and surgical treatment. The conservative treatment involves antibiotics and non-steroidal anti-inflammatory drugs (NSAIDs) as reported by Necmi Bayraktar and Ismet Basar in 2012 and also Eran Rosenberg et al in 2007 [4][5].

Surgical approach is the mainstay treatment of penile paraffinoma according to Muraro et al in 1996 which stated that it is the only treatment that can achieve cosmetic and functionality effectiveness [6]. This is in keeping with AP Downey et al in 2018 and Jae Ho Jeong et al in 1996 whereby they concluded that surgical excision is the definitive management of this condition [3][7].

According to Pedro L. S. Faveret and Fabio Santiago in 2017, the most common surgical procedures done to treat penile paraffinoma is excision and scrotal flap technique [8]. This finding is supported by a number of literatures that demonstrated the use of surgical excision and scrotal flap technique such as those reported by Jae Ho Jeong et al in 1996, Muraro et al in 1996 and Manjit Singh et al in 2015 [7][6][9].

Péter Nyirády et al in 2007 stated that surgical treatment of complete excision of involved penile tissue is the best choice of treatment of sclerosing lipogranuloma [10]. Furthermore, according to Azhar Amir Hamzah et al in 2015, best result with minimal recurrence can be achieved with surgical excision followed by penile resurfacing [11].

As far as Malaysia is concerned, the authors believe that the injection of foreign materials into the penis by non-medical personnel is not as uncommon as it seems. The complication that comes with it is underreported. Since there are not many such cases are reported here in Malaysia, this article reports a case of penile paraffinoma that was managed by surgical treatment with a good outcome which is the best treatment option available.

2.0 Case Report

A 32-year-old gentleman with no known medical illness initially presented to surgical outpatient clinic with 6-month history of penile swelling. He did not complain of penile discharge or difficulty to void and he was able to pass urine normally. For the past 6 months, he was initially able to have appropriate erection, but the swelling prevented him from having sexual intercourse.

Upon further history, he claimed to have visited a traditional practitioner 5 years prior to presentation at surgical outpatient clinic for penile augmentation whereby he had ‘mineral oil’ injected to the ventral and dorsal part of his penis for that purpose. His penis gradually hardens and unfortunately enlarged out of proportion and developed painful erection.
On examination of the external genitalia (Figure 1), it was found that the shaft of the penis was enlarged and harden. Otherwise, scrotum is healthy with normal testes bilaterally and no inguinal lymph nodes palpable. Examination of other systems were unremarkable.

Blood tests were sent for laboratory investigations that include full blood count, renal profile and random blood sugar which were all within normal range.

The patient was counselled regarding the condition and treatment available. He eventually consented for surgery.

Figure 1: Photo of the external genitalia upon presentation at surgical outpatient clinic (taken with consent)

Figure 2: Intraoperative photos of the penis show the appearance of the penile shaft after wide local excision (taken with consent)

Figure 3: Post-operative photos of the penis with surgical drain intact and after it was removed (taken with consent)
Wide local excision (Figure 2) with bilateral scrotal flap for penile coverage was done for this patient. The surgical procedure went smoothly with minimal blood loss and without intraoperative complication. Surgical drain was placed to drain blood (Figure 3). The patient made an uneventful recovery.

Excised specimen was sent for histopathological examination. The pathologist reported that there was intact normal epidermis. However, the dermis is congested and fibrosed which contains a fairly heavy chronic inflammatory infiltrate that includes a few lymphocytic aggregates and occasional foreign body giant cells are noted with granuloma is seen. There is no active inflammation or evidence of malignancy. Histopathological diagnosis made was penile lesion with chronic non-specific posphitis.

3.0 Discussion

The management of this condition can be generally divided into two which are conservative management as well as definitive management which involves surgical approach. According to AP Downey et al in 2018, the conservative management may be applicable in minor cases of penile paraffinoma in which the patients are asymptomatic [3]. Another article of penile paraffinoma case has been published whereby it was conservatively managed as reported by Rosenberg et al in 2007 [4]. There are limited number of cases that are conservatively managed.

Surgical management is still the best option as demonstrated by various literatures [10][11]. There are many surgical techniques that can be used in the treatment of penile paraffinoma following surgical excision of granulomatus and fibrotic tissues which include penile skin-preserving technique and penile skin-removal with grafting or flaps [16]. Surgical excision and scrotal flaps technique with good outcomes have been reported by Jeong et al in 1996, Muraro GB et al in 1996, Manjit Sing et al in 2015, Ida Bagus et al in 2019, VR Duney et al in 2019 [7][6][9][13][14]. Meanwhile, Azhar Amir Hamzah et al in 2015 and Fam Xeng Inn et al in 2012 reported to have used surgical excision with skin grafting harvested from groin and inner thigh respectively which eventually have good outcomes [11][12]. Lastly, surgical management of penile paraffinoma with skin-preserving technique cases have also been reported by Athanasios E. Delli et al in 2017 and Jong Sun Kim et al in 2019 [15][16].

There are many case reports that demonstrate good outcome following surgical intervention such as those reported by Fam Xeng Inn et al in 2012, Azhar Amir Hamzah et al in 2015 and Duney et al in 2019 [12][11][13].

4.0 Conclusion and Recommendation

The patient discussed in this article has undergone surgical excision as this is the best treatment option available to restore functionality, to avoid recurrent of symptoms and to improve cosmetic appearance. The surgical approach used was scrotal flaps following surgical excision for skin coverage of penile shaft and the patient recovered uneventfully.
In a nutshell, based on the literature review and our case report, we believe that surgical treatment is the best of option to treat penile paraffinoma in order for the patient to retain normal sexual function and attain better cosmetic appearance as well as to resolve the symptoms. Even though not many penile paraffinoma cases are reported, we believe that the prevalence is high in Malaysia due to under-reporting and the increasing incidence of this condition warrants the surgeons to equip themselves with the surgical skill such as the scrotal flap surgery.

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Declaration

The authors declare no conflict of interests. The authors alone are responsible for the content and writing of the paper.

Authors contribution

Author 1: Wrote the manuscript under supervision of author 2.

Author 2: Provided feedback and supervision for the whole process of writing and publication.

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